

Appl. No.: 09/989,289
Amdt. dated 07/12/2006
Reply to Office Action of January 12, 2006

REMARKS/ARGUMENTS

Applicant notes with appreciation the discussion with the Examiner today. Applicant has amended claims 35, 61 and 87 to recite that the wire has “sufficient strength to tear through the conduit” and this language is supported on page 10, lines 7-10 of the application. All of the independent claims have been amended to remove the language that the stabilizing rib is integral with the elongate polymeric tube. However, new claims 113-115 have been added with this language that are dependent on claims 35, 61 and 87, respectively. New claims 116-127 have also been added and the independent claims (116, 119, 120, 123, 124 and 127) correspond to claims 43, 45, 69, 71, 95 and 97, respectively, except that they do not include the language that the stabilizing rib is integral with the elongate polymeric tube. Applicants respectfully request entry of these amendments. Claims 36-41, 54-56, 62-67, 80-82, 88-93 and 106-108 have been canceled. Accordingly, claims 35, 42-53, 57-61, 68-79, 83-87, 94-105 and 109-127 are pending in the present application.

Independent Claims 35, 61 and 87

Claims 35, 61 and 87 of the present application stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Sherlock (U.S. Patent No. 3,367,370), Pelzer (U.S. Patent No. 5,212,349) and Bergemann (German reference DE 2 248 441).

The Office Action states that Sherlock discloses a toneable conduit but acknowledges that Sherlock fails to disclose a channel within the wall of the polymeric tube, a stabilizing rib extending longitudinally along the interior surface of the wall and located radially inward from said channel, and a continuous high elongation wire capable of transmitting a toning signal to allow the conduit to be detected by toning equipment and capable of being torn out of the polymeric tube to allow the conduit and wire to be coupled. The Office Action argues, however, that Pelzer teaches a channel 18 within the wall 16 of the polymeric tube 12 and that Figure 1 of Bergemann teaches a stabilizing rib extending longitudinally along the interior surface of the wall of the elongate polymeric tube and located radially inward from the channel.

Sherlock discloses a plastic pipe construction having metallic material of relatively high electrical or electronic conductivity and sensitivity secured to the pipe body that allows the pipe to be located underground. See Abstract of the Disclosure.

Pelzer discloses a method of inserting a detector wire into a cable duct by making a wire-receiving groove in a wall of the duct, laying the wire in the receiving groove, and leading a separate, softened filler material into the receiving groove and welding it to the duct wall to embed the detector wire in the duct wall. See Abstract of the Disclosure.

Bergemann discloses plastic pipe having a metallic wire conductor embedded therein for purposes of locating the pipe after installation. Bergemann also teaches embedding the conductor in a bead located either inward or outward of the pipe (Figures 1 and 2, respectively) or embedded in the pipe itself (Figure 3).

The combination of Sherlock, Pelzer and Bergemann does not teach or suggest the subject matter of claims 35, 61 and 87 as now presented. Specifically, none of the references discloses or suggests the use of a wire that has "sufficient strength to tear through the conduit." In addressing the rejection of claims 57, 83 and 109, the final Office Action acknowledges that Wood does not disclose tearing the wire of the conduit through the exterior surface of the conduit but states that Pelzer provides this teaching at column 12, lines 24-27. In fact, this passage of Pelzer and Pelzer as a whole teaches away from tearing the wire through the conduit. For example, Pelzer states at column 5, lines 48-67 that the invention includes a device that "has a knife contact which cuts into the duct wall, and makes contact with the detector wire when the collar is closed." Column 11, line 17 to column 12, lines 38 of Pelzer also discusses this connecting device. Thus, Pelzer discloses not tearing the wire through the conduit but rather using a knife to cut the conduit and access the wire. Sherlock and Bergemann (and Wood, for that matter) also do not disclose or suggest tearing the wire through the conduit. Furthermore, Pelzer, Sherlock, Bergemann and Wood also fail to provide any teaching or suggestion for including a wire in the conduit that has sufficient strength to tear through the conduit. The additional references cited in the final Office Action (Pyramid, Craton, Tzeng, Levingston, Karl, Bird, and Nakamura) also fail to teach or suggest a wire that has sufficient strength to tear through the conduit. Therefore, claims 35, 61 and 87 and the claims dependent thereon are not

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obvious in view of the combination of Sherlock, Pelzer and Bergemann and Applicant respectfully requests that the rejection of these claims be withdrawn.

Independent Claims 57, 83 and 109

Claims 57, 83 and 109 of the present application stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Wood (U.S. Patent No. 4,109,941), Sherlock (U.S. Patent No. 3,367,370), Pelzer (U.S. Patent No. 5,212,349) and Bergemann (German reference DE 2 248 441). As discussed above, none of these references or any of the other cited references teaches or suggests tearing a wire through a conduit and, in fact, Pelzer actually teaches away from this step. Accordingly, these claims and the claims dependent thereon are not obvious in view of the cited references and Applicant respectfully requests that the rejection of these claims be withdrawn.

Independent Claims 116, 120 and 124

Claims 116, 120 and 124 of the present application recite the use of a copper-clad steel wire in the conduit. The final Office Action acknowledges that Sherlock, Pelzer and Bergemann fail to provide this teaching but argues that Craton (U.S. Patent No. 6,139,957) teaches a copper-clad steel wire at column 4, line 11 with regard to wires 12 and 15.

Craton describes a communications cable formed of a twisted pair of insulated conductors that uses a particular blowing agent for forming the insulation. The only mention of copper-clad steel is at column 4, lines 9-12 where it states “[t]he conductors 12 and 15 may be a metallic wire of any of the well-known metallic conductors used in wire and cable applications, such as copper, aluminum, copper-clad aluminum, and copper-clad steel.” One skilled in the art of toneable conduit would not look to a reference related to twisted pair cables to determine what type of wire should be used in the conduit. The desirable properties of a wire used in a twisted pair of cables would not necessarily be the same as the desirable properties of a wire used as a toning wire in conduit. Furthermore, there is no teaching or suggestion in Craton for reasons for using one particular type of wire over another. Pelzer describes a the use of copper wire and preferably an enameled copper wire in its cable duct and Sherlock and Bergemann both do not

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disclose a particular type of wire. None of the cited references provide a teaching or suggestion as to why one skilled in the art would modify any of these references to provide a copper-clad steel wire in a toneable conduit. Since one skilled in the art would not look to Craton to determine what wire should be used in a toneable conduit and because there is no teaching or suggestion in the cited references for using copper-clad steel wire in a toneable conduit, claims 116, 120 and 124 are not obvious over the cited references.

Independent Claims 119, 123 and 127

Claims 119, 123 and 127 of the present application recite using a wire that is coated with a coating composition that prevents the wire from adhering to the polymer melt used to form the polymeric tube. The final Office Action argues that Sherlock teaches this feature and specifically refers to wire 22 coated with plastic 24 in Figure 4. Nevertheless, Sherlock does not disclose or suggest using a coating composition that prevents the wire from adhering to a polymer melt. In fact, Sherlock discloses fusing or adhering the plastic coated wire to the plastic pipe at column 2, lines 46-50. Therefore, Sherlock does not teach or suggest this feature of claims 119, 123 and 127.

The final Office Action also relies on the teaching of Tzeng (U.S. Patent No. 6,005,191) for teaching specific coating compositions for wire. Tzeng is directed to heat-shrinkable electromagnetic interference (EMI) shielding jackets and particularly heat shrinkable jackets to confine the EMI energy within a source device, and to insulate that device or other "target" devices from other source devices. The final Office Action states that Tzeng teaches a coating composition at column 6, lines 11-14 having a melting temperature of at least about 500°F; however, this language relates to a heat-shrinkable material for the EMI shielding device. Tzeng thus deals with a much different area than the Sherlock, Pelzer and Bergemann references and one skilled in the art of toneable conduit would not refer to the teachings of Tzeng. Furthermore, Tzeng (like the other cited references) fails to disclose coating a wire with a coating composition that prevents the wire from adhering to a polymer melt used to form a polymeric tube. Accordingly, claims 119, 123 and 127 are not obvious over the cited references.

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Applicants respectfully submit that all the claims are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested in due course. If any minor informalities need to be addressed, the Examiner is directed to contact the undersigned attorney by telephone to facilitate prosecution of this case.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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